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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,690	08/05/2003	Devon R.N. Byrd	IVGN 254.1	5456
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INVITROGEN CORPORATION C/O INTELLEVATE P.O. BOX 52050 MINNEAPOLIS, MN 55402			EXAMINER STRZELECKA, TERESA E	
			ART UNIT 1637	PAPER NUMBER
			MAIL DATE 02/06/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/633,690

Applicant(s)

BYRD ET AL.

Examiner

Teresa E. Strzelecka

Art Unit

1637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 and 42-100 is/are pending in the application.
- 4a) Of the above claim(s) 1-9, 14, 16-19, 23-38, 42-46, 50, 51 and 53-98 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-13, 15, 20-22, 47-49, 52, 99 and 100 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/20/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group II (claims 10-15, 20-22 and 47-52; species of SEQ ID NO: 79 and species of modification being a label) in the reply filed on November 21, 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 1-9,14,16-19,23-38,42-46,50,51 and 53-98 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions and species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on November 21, 2007.
3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).
4. Claims 10-13, 15, 20-22, 47-49, 52, 99 and 100 will be examined. Applicants elected SEQ ID NO: 79 for examination, however, this sequence is not present in any of the claims under consideration, since Applicants amended claims 11, 22 and 49 to read on any replicator terminator protein, therefore SEQ ID NO: 79 will not be considered when comparing the claims to prior art.

Information Disclosure Statement

5. The information disclosure statement (IDS) submitted on September 20, 2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Interpretation

6. Applicants did not define the term “Ter-binding protein”, therefore, in principle, it could be considered as any protein.

7. Applicants did not define the term “modified protein”, therefore, any molecule added either covalently or non-covalently to the protein is considered to be a modifier. Further, this term encompasses any number of mutations in the protein. Finally, following from the above, any protein can be considered to be a “modified Ter-binding protein”.

8. The labels are considered to be attached to the protein either directly or indirectly.

9. Applicants defined the term “replicator terminator protein” on page 55, [0129] as follows:

“An RTP is a sequence specific DNA-binding protein which, when bound to the double stranded termination sequence, allows replication arrest.”

10. The term “portion of a protein” was not defined by Applicants, therefore it is considered as at least a single amino acid.

11. Applicants did not defined the term “attached to a support”, therefore both direct and indirect, as well as covalent and non-covalent attachment are considered to anticipate this term.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 10-13, 15, 20-22, 47-49, 52, 99 and 100 are rejected under 35 U.S.C. 102(b) as being anticipated by Ge (Nucl. Acids Res., vol. 28, e3, pp. i-vii, 2000).

Regarding claims 10-13, Ge teaches 48 different proteins (page i, last paragraph; page ii, first and second paragraph), therefore, since each of these proteins has at least 21 amino acids, it is considered to be a portion of an RTP protein. Therefore, the non-homologous parts of any one of these proteins are considered as insertions into a portion of the RTP protein.

Regarding claim 15, Ge teaches labeling of proteins on the array with radioactively-labeled proteins (page ii, third paragraph; Fig. 1).

Regarding claims 20-22 and 47-49, Ge teaches 48 different proteins attached to non-biological solid support (page ii, 8th paragraph).

Regarding claims 52, 99 and 100, Ge teaches nitrocellulose membrane as the support (page ii, second paragraph).

14. Claims 10-13, 20-22, 47-49, 99 and 100 are rejected under 35 U.S.C. 102(b) as being anticipated by Neylon et al. (Biochemistry, vol. 39, pp. 11989-11999, 1999; cited in the IDS).

Regarding claims 10-13, Neylon et al. teach modified Tus protein (= Ter-binding protein), where the modified protein either has a His-6 tag (=fusion of a portion of a protein sequence), or mutated residues (=insertion of a portion of a protein sequence), or both (Fig. 1; page 11991, second paragraph; page 11992, second paragraph).

Regarding claims 20-22 and 47-49, Neylon et al. teach attachment of Ter-proteins to a BIACORE chip (=non-biological material) via a nucleic acid with a Ter-binding site (page 11992, third paragraph).

Regarding claims 99 and 100, Neylon et al. teach biochips (page 11992, third paragraph).

15. Claims 10, 11, 15, 20-22, 47-49, 52, 99 and 100 are rejected under 35 U.S.C. 102(b) as being anticipated by Guajardo et al. (Nucl. Acids Res., vol. 27, pp. 2814-2824, 1999).

Regarding claims 10, 11 and 15, Guajardo et al. teach Tus protein (= Ter-binding protein) modified by labeling with a double-stranded radiolabeled DNA (page 2815, third and seventh paragraphs).

Regarding claims 20-22 and 47-49, Guajardo et al. teach Tus protein (= Ter-binding protein) bound to nitrocellulose filters (= non-biological material) (page 2815, seventh paragraph).

Regarding claims 52, 99 and 100, Guajardo et al. teach nitrocellulose filters (page 2815, seventh paragraph).

16. Claims 10-13, 15, 20-22, 47-49, 99 and 100 are rejected under 35 U.S.C. 102(a) as being anticipated by Mulugu et al. (PNAS USA, vol. 98, pp. 9569-9574, August 14, 2001).

Regarding claims 10-13, Mulugu et al. teach modified Tus protein (= Ter-binding protein), where the modification included site-directed mutagenesis, fusion to GAL4 binding domain or GST (page 9570, sixth-paragraph; Fig. 3; page 9572, fourth paragraph).

Regarding claim 15, Mulugu et al. teach the Ter-protein modified with a radiolabeled DnaB-protein (Fig. 4).

Regarding claims 20-22 and 47-49, Mulugu et al. teach Tus attached to microtiter plates or glutathione-agarose beads (= non-biological support) (page 9572, paragraphs 2-4).

Regarding claims 99 and 100, Mulugu et al. teach polystyrene and agarose beads (page 9752, second and fourth paragraphs).

17. No claims are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa E. Strzelecka whose telephone number is (571) 272-0789. The examiner can normally be reached on M-F (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on (571) 272-0782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Teresa E Strzelecka
Primary Examiner
Art Unit 1637

Teresa Strzelecka

2/1/08